Scandinavian Forest Economics
No. 44, 2012

Proceedings of the Biennial Meeting of the
Scandinavian Society of Forest Economics
Hyytiälä, Finland, May 2012

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The role of concepts in reforming practical forestry in Finland - from social sustainability to ecosystem approach

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Abstract

The social dimension of sustainable forestry has repeatedly been regarded as difficult to comprehend. However, the social and societal considerations within forestry have been steadily evolving during the past decades intertwined as well with the overall global social development efforts as with the innovations produced by various practical grassroots forestry actors. The recent new concepts of ecosystem approach and ecosystem services provide new insights into the social complexity of forestry. The main part of the article describes recent developments related to the above mentioned concepts in Finland both nationally and in state-owned and private forests. The article is finalised by conclusions concerning the role of concepts as tools for promoting forestry's contribution to sustainable development.

Keywords: sustainable forestry, social dimension, forestry organisations, forest policy

1 From social sustainability to ecosystem approach

1.1 Evolvement of social considerations in forestry internationally

The report of the World Commission on Sustainable Development (WCED) from 1987 opened the global discussion on sustainable development. It is also commonly mentioned as the most significant starting point for social sustainability strategies in forestry. However, only the resolutions and documents of the United Nations Conference on Environment and Development (UNCED) in 1992, which dealt more thoroughly with social issues in general and also within forestry, led to concrete changes in forestry policies and practices in many countries. The adaptation of the globally agreed forestry principles into European and Finnish conditions was speeded up by the second Ministerial Conference on the Protection of Forests in Europe held in Helsinki 1993 and further elaborated in the following ministerial conferences.

The WCED and UNCED resolutions contain statements emphasising the equal rights of all people to satisfy their needs within the limits of ecosystems. The WCED report included the ideas of "social equity between generations" and "equality within each generation". Concerning forestry, the WCED discussed mainly environmental problems connected to forest degradation and deforestation. Protection and sustainable use of forest resources were seen in the report as prerequisites for economic and social development. The most significant forestry documents produced by the UNCED are the Forest Principles and the chapter on deforestion in Agenda 21. The social elements in these agreements include the principle of multiple use, the right of people to participate in decision-making affecting forest resources and their own living conditions, and the recognition of cultural aspect of forests.

Social dimensions of forestry have been elaborated also within the Ministerial conferences on the Protection of Forests in Europe (MCPFE). The most socially oriented resolutions produced in the conferences are resolution L1 "People, Forests and Forestry - Enhancement of Socio-Economic Aspects of Sustainable Forest Management" agreed on in Lissabon 1998 and

resolution V3 "Preserving and Enhancing the Social and Cultural Dimensions of Sustainable Forest Management in Europe" agreed on in Vienna 2003. The Lissabon resolution deals, inter alia, with rural development, recreation, non-wood forest products, participation, safety and gender issues. The Vienna resolution promotes the material and non-material cultural heritage benefits based on forests and wood. Also many other MCPFE agreements include social aspects. For example, Vienna resolution V1 "Strengthen synergies for sustainable forest management in Europe through cross-sectoral co-operation and National Forest Programme" emphasises social and political issues such as participation and partnerships for implementation.

1.2 International social agreements

Simultaneously with the entrance of social concerns into forestry there has been parallel international processes dealing with socially sustainable development. A prominent global event dealing with social sustainability was the World Summit for Social Development, held in March 1995 in Copenhagen. The main goals set in the Summit were eradication of poverty, promotion of productive employment and social integration. A defininition of social development was presented in the Summit according to which "The ultimate goal of social development is to improve and enhance the quality of life of all people. It requires democratic institutions, respect for all human rights and fundamental freedoms, increased and equal economic opportunities, the rule of law, the promotion of respect for cultural diversity and rights of persons belonging to minorities and an active involvement of the civil society." (Report of the World... 2005.) This definition includes ideas which have been promoted even earlier, for example, in the Universal Declaration of Human Rights (United Nations… 1948), the International Covenant on Economic, Social and Cultural Rights (United Nations… 1966) and various other agreements and declarations concerning i.a. children, women, labour and cultural diversity.

Global social challenges were again defined internationally at the Millenium Summit in 2000. At the meeting, 189 countries signed the United Nations Millenium Declaration, on the basis of which eight Millenium Development Goals (MDGs) were developed (United Nations… 2009). Many problems behind the millenium goals are most acute in developing countries, but for example environmental challenges are nowadays increasingly global. The MDGs most closely related to forestry are eradication of extreme poverty and hunger, promotion of gender equality and empowering women, ensuring environmental sustainability and developing global partnerships for development.

1.3 Origins of the ecosystem approach

Recent new contexts for social forestry considerations are the ecosystem approach developed within the follow-up of the UN Convention on Biological Diversity (CBD) during the period 1995-2004 and the ecosystem services -classification brought up by the UN Millennium Ecosystem Assessment (MEA), which was carried out 2001-2005. The CBD ecosystem approach emphasises integrated management of land, water and living resources in a sustainable and equitable way (Ecosystem Approach. 2012). The MEA aims to enhance the conservation and sustainable use of ecosystems and their contribution to human well-being (Millennium Ecosystem... 2010). The MEA has led to extensive elaboration of the contents of ecosystem services. The analytically and practically oriented ecosystem services thinking has become a part of the broader and more societally oriented ecosystem approach.
According to the MEA, ecosystem services can be classified into four groups: provisioning, regulating, cultural and supporting services. For example in Finland the forest-based provisioning services include wood, bioenergy, genes, food, water, game, berries and mushrooms, decorative greenery and peat. Regulating services include flood control, climate

regulation, carbon sequestration, erosion control, protection of water quality, noise reduction and pollination. Cultural services refer to landscapes, recreation areas, aesthetics, rural livelihoods, folklore, hunting and spiritual experiences. Supporting services are necessary for the production of all other ecosystem services. They include soil formation, nutrient cycling and primary production. (Ecosystems and human well-being - A framework... 2003, 56-60; Matero & Saastamoinen 2007, Hytönen 2009.)

Both the ecosystem approach developed within the CBD and the MEA include social concerns. The ecosystem approach emphasises that humans, with their cultural diversity, are an integral component of ecosystems. Most of the principles of ecosystem approach are social or require societal arrangements. The MEA elaborates the human dimension further by stating that "changes in ecosystem services affect human well-being through impacts on security, the necessary material for a good life, health and social and cultural relations. These constituents of well-being are in turn influenced by and have an influence on the freedoms and choices available to people" (Ecosystems and human well-being - A Framework... 2005, 78). The emphasis on fairness and cultural diversity in the ecosystem approach and the elaboration of human well-being in the MEA are in line with the global strategies to promote socially sustainable development. The practical tools recommended by the ecosystem approach include socially sensitive adaptive management and multisectoral cooperation. The MEA urges public administrations to reform organisational structures to respond better to the new challenges. According to MEA, the empowerment of communities, women and youth can play an essential role in responding to the problem of environmental degradation. (Ecosystems and human well-being - Synthesis... 2005, 18-25)

2 Examples of practical implementation of social concerns and the ecosystem approach

2.1 National forest policy

As a consequence of the international inter-governmental forestry processes, most of the Finnish forestry legislation was reformed and updated during the 1990s, and the idea of sustainability was included in various laws affecting forestry. As a result of the international agreements new forest policy tools such as national forest programmes were adopted. In addition, sustainability issues were included in the guidelines and action plans published by various actors in the field of forestry.

At the moment (2012), both the forestry legislation and the tasks of the publicly funded forestry organisations are again under revision. According to the Government Programme, the reform aims to promote increasingly diversified forest management. Another socially significant objective is to provide equitable opportunities for various operators in the forest services markets. (Programme of... 2011.)

National forest programmes are an important forest policy tool for the public admininistration. The rest of this sub-chapter deals only with social issues expressed in these programmes, although there exists a lot of other important policy tools, many of which are economic or regulatory instruments. One reason for the essentiality of the programmes is the participatory drafting process, involving various ministries, civil society actors and representatives of both large forest industry enterprises as well as smaller entrepreneurs.

The first Finnish National Forest Programme (NFP) stated that it will support social sustainability by strengthening the preconditions for family forestry, by slowing down the decrease in rural employment and by supporting the creation of new occupations based on value added wood products and energy production. In addition, social and cultural sustainability was recommended to be supported by coordinating timber production with the traditional forms of forest use, i.e. hunting, berry and mushroom picking and reindeer husbandry. Securing the public right of access was set as an objective, and forest-based outdoor recreation was considered as a precondition for social sustainability because of its great importance for physical and mental health. As a new element in Finnish forest policy programmes, the first NFP underlined the importance to expand and diversify business activities and employment connected to forests by supporting enterprises specialising, for example, in tourism and various forms of recreational services, and in processing of non-wood forest products. (Finland's National… 1999.)

The second NFP for the years 2008-2015 does not make explicit statements concerning social sustainability. However, the programme emphasises various social aspects of forestry. According to the programme, forest-related welfare consists of many material and immaterial factors, such as health, employment, livelihood, recreation as well as a clean, healthy and vigorous environment. The programme also states that both material and immaterial commodities of forests could be utilised to create new opportunities for various types of livelihoods. New issues brought into discussion by the programme include protecting biodiversity by voluntary means, trade of recreational values and diversification of services for forest owners. The role of regional forest programmes, natural resource plans for state-owned areas and provincial land-use plans is emphasised as a means to harmonise the interests of the various stakeholders, and the idea of acceptability has for the first time been included as a criterion for developing forest policy. (Finland's National... 2008.)

The implemention of the NFP is based on the cooperation of public and private actors. The private actors include forest industry, small and medium-size enterprises, forest owners and representatives of various interest groups. The regional administrations, forestry organisations and rural development organisations also play an important role in the implementation. Furthermore, the programme is developed, and up-dated if needed, on the basis of evaluations, development projects and annual progress reports. (Finland's National... 2008.)

The original and revised versions of the second NFP include a definition of ecosystem approach. They do not elaborate the utilisation of the approach further, but the revised version uses the concept of ecosystem services in various contexts. (Finland's National... 2008, Finland's National... 2011.)

The second NFP was evaluated simultaneously with the preparation process. The evaluation makes critical remarks. For example, the report states that except general level statements the programme is insensitive to gender issues. Also questions concerning regional development were found to be inadequately covered. (Kansallisen metsäohjelman ennakkoarviointi - Loppuraportti metsäneuvostolle. 2007.)

2.2 Publicly owned forests

About 35 % of Finland's forestry land are owned by the state and 2 % by municipalities. Although the share of municipal ownership is small, the influence of municipal decision making is growing, for example, through land-use planning, establishing and maintaining areas for amenity purposes, providing forest-related information and education, and by creating favorable

conditions for private nature-based enterprises. Despite the increasing role of municipalities, the rest of this sub-chapter will concentrate on state-owned forests.

Most of the state-owned land is taken care by Metsähallitus, which is a state enterprise administering 9 million hectares of land and 3 million hectares of water areas. Metsähallitus carries out both business activities and public administration duties. About 5 million hectares forest land is managed for timber production with attention to nature protection and multiple use and 4 million hectares are covered with nature conservation, recreation and other special-purpose nature areas. The timber production activities are financed by income from the operations, and a part of the profit is channeled to the state budget. The public duties are carried out by the Natural Heritage Services and financed by the state budget.

Traditionally the main law-based social duties of Metsähallitus have been the provision of employment and recreation opportunities for citizens. From 1990s, social sustainability issues have been discussed and developed also in the context of public participation in the planning systems. A handbook for organising public participation was published by the agency in Finnish in 1997 and in English 1999 (Loikkanen et al. 1999).

According to the public participation guidelines, a precondition for social sustainability is locally and regionally accepted use of forest resources. Because of this Metsähallitus uses various participation methods to determine the different implications of alternative plans and their acceptability. The agency aims to provide an opportunity for every interested person to participate in the planning processes at all levels. The development work of the participatory systems has led to many procedural changes and innovations in the planning systems, and it has even been supported by independent critical research (e.g. Raitio 2008).

Since 2005, the Natural Heritage Services of Metsähallitus has measured and monitored the fulfilment of its social obligations in the follow-up reports to the Ministry of Agriculture, the Ministry of the Environment and the Government. The reports contain information on nature protection, nature management, recreation, nature tourism and the welfare of the workers of the Natural Heritage Services.

There are also other concrete measures within Metsähallitus which are socially significant. These include the principles for sustainable tourism in nature protection areas published in 2004, and partnerships with local entrepreneurs and cultural organisations. Recently the agency has started to compile customer surveys and studies on the economic significance of national parks to local people. Monitoring of the environmental, social and economic impacts of tourism with the help of concrete indicators has also been developed in connection to the management of national parks (e.g. Sarlin 2009).

In 2009-2010 Metsähallitus updated the planning and management procedures of nature protection and recreation areas according to the ideas of ecosystem approach. The guiding principle for the future activities is adaptive management. The new approach is very socially oriented and emphasises the importance of cooperation with local communities in protecting the environment simultaneously with promoting nature-based livelihoods. (Suojelualueiden hoidon ja käytön periaatteet 2010) .

So far the inclusion of social aspects and monitoring has been more extensive and pronounced in the work of Natural Heritage Services than in the commercial timber production activities coordinated by the Metsähallitus' Forestry Unit. However, in natural resource plans which cover both timber production, recreation and nature protection areas, social impacts are

described concerning employment, recreation and landscape, non-wood forest livelihoods and cultural heritage. The plans also contain information on various forest uses such as hiking, picking of berries and mushrooms, hunting, reindeer herding, mining, timber production, tourism and cultural values.

The handbook of environmental issues in forestry compiled by the Forestry Unit is another important guidelines affecting the concrete measures taken in timber production forests. This guidebook, which contains information on biological diversity, protection of endangered species, protection of soil and waterways, landscape management, game management, cultural heritage and non-wood forest uses was first published in 1993, and has been updated in 1997, 2004 and 2011. The contents of the handbook have evolved along the years, the latest version includes increased attention, for example, to wood production for energy and climate change. The new handbook is based on ecosystem approach and applies the concept of ecosystem services extensively (Metsätalouden ympäristöopas. 2011).

2.3 Private forests

The largest owner group of forests is private individuals and families. They are often called non-industrial private forest owners (NIPFs), however Finnish forest industries are highly dependent on private timber supply. About 52 % of the forestry land are owned by the NIPFs. Some 11 % is taken care by various other owner groups, the biggest of which are forest industry companies, common forests (jointly-owned forests) and parishes. The rest of this sub-chapter deals only with the NIPFs.

Income from roundwood sales for private forest owners is often mentioned as the most socio-economically significant forest benefit because most of it goes to rural areas and is received by a large number of households. Farmers and other rural residents often get income from many sources and forest work, and timber revenue form an important share in the totality.

Private forest owners are assisted by state-subsidised organisations. These organisations have defined their relationship to social sustainability. The local Forest Management Associations and the Finnish Forestry Centre with its regional districts provide mainly timber-production oriented assistance to private forest owners. The national Forestry Development Centre Tapio produces broad-scale information services for private forestry organisations. Recently also the big forest industry enterprises and private forest consultanst have increased their services to private forest owners.

The Forest Management Associations have a law-based duty to promote social sustainability of forestry. In practice, the Associations have not elaborated the contents of their social obligations, apart from a few development projects. Their main field of work is silviculture and timber trade.

The regional forest programmes compiled by the districts of the Finnish Forestry Centre in cooperation with local interest groups are essential forest policy tools which can be used to promote social sustainability in private forests. These programmes define the needs and objectives for the management of forests, forest-based business, multiple use and protection of forests, and propose the measures and necessary funding to reach the objectives.

According to the majority of regional forest programmes, the social objective of sustainable forestry is to manage and utilise forests so that their ability to provide livelihoods, recreation and cultural values is maintained. Some plans include more elaborated statements concerning,

for example, welfare and acceptability. Social elements and processes described in the programmes include employment, entrepreneurship, culture, landscape, quality of life, occupational well-being and traditional multiple use. Social processes which are most often discussed in the programmes are cooperation with stakeholder groups, multi-objective planning methods, diversified silvicultural methods, and support to private entrepreneurs by economic, informative and educational means (Huhtala et al. 2007) However, it has been repeatedly stated that both the regional forest programmes and the follow-up reporting cover inadequately multiple use, small-scale business and other socio-economic aspects of forestry.

The Forestry Development Centre Tapio has a long history in promoting multiple use and social sustainability. Since 1990s, Tapio has published information and guidelines for management of cultural heritage, forest tourism, urban silviculture, rural development, landscape and special wood production. The general guidelines for good silviculture include practical advice, in addition to timber production, dealing with urban forests, landscape, game management, cultural areas and non-wood forest products. The social themes discussed in the guidelines include well-being of forest owners, forest workers and forestry entrepreneurs, forestry's role in rural economies, the diversity of forest owners' values, participatory decision-making practices, the public right of access, recreation, picking of wild berries and mushrooms and hunting (Hyvän metsänhoidon suositukset 2006). At the moment (2012), the recommendations are being up-dated in a process involving experts from the fields of forestry, energy and environmental protection.

As a consequence of the recent changes in the structure of forest ownership, the diversity of objectives of forest owners has increased. The appreciation of other forest values than timber production is growing. This trend is likely to continue because the amount of urban, female, wealthy and non-farmer forest owners is getting bigger (Leppänen 2010). This change requires reforms in the publicly-supported information services as well as opening up of the markets for private forest planning and management services. The need of these reforms has recently been acknowledged in the Government Programme and in the proposal for the new Forest Act (Programme of Prime… 2011, Metsänkäsittelymenetelmien –jatkotyöryhmän muistio 2012). Also researchers have argued for more adaptive and cooperative communication culture between forest owners and forestry professionals (e.g. Tikkanen et al. 2010).

The concept of ecosystem approach has been seldom used in private forestry, although many trends and activities in the sector conform to it, for example in connection to nature tourism and cultural heritage. The concept of ecosystem services is used to some extent, and an EU - supported project has been started to generate income from non-wood forest-based ecosystem services to private forest owners and other rural dwellers in south-western Finland.

3 Concepts as tools

Finnish forestry has been affected by high-powered socially-oriented concepts since the 1950s. They include "multiple-use forestry", "sustainable forestry", "ecosystem approach" and "ecosystem services". A remarkable social innovation has been the idea to clarify the concept of "sustainable development" by ecological, economic and social dimensions. These three viewpoints remind forestry actors about the need to understand interactions and to create balance between the three dimensions. This division has helped to promote social concerns which are otherwise easily disregarded as too difficult, political or abstract.

The examples presented in this article show that practical actors find ways to apply and utilise the innovative ideas brought up by the internationally developed concepts. Generally, concepts can

- bring new socially-accepted ideas, viewpoints and objectives into development efforts
- help to implement research-based ideas into practice
- provide systematic frameworks for both theoretical considerations and practical activities
- create coherence and continuity to development efforts – people come and go
- provide inspiration for innovations
- give guidance to public administrators, business ideas for market actors and benchmarks for civil society activities
- show direction to better future.

The concepts of social sustainability and ecosystem approach discussed in this article are important phases in adapting to the socio-economic and ecological challenges facing forestry. New conceptual contexts for social considerations in forestry are provided by the concepts of green economy, bioeconomy and dematerialisation (decoupling). The social dimension needs to be included also into these new approaches.

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